^{254}No

^{254}No was simultaneously discovered in 1966 in two papers with the same title "The properties of the isotope 102^{254}" by Donets et al. (1966Do04) and Zager et al. (1966Za04). Donets et al. used a ^{22}Ne beam from the Dubna 300-cm cyclotron to bombard ^{238}U producing ^{254}No in the (6n) fusion-evaporation reaction. Recoil products diffused in a gas onto a disk which was rotated in front of a collection region. The α-decay of the ^{250}Fm daughters was then measured with an α-spectrometer following chemical separation. The half-life was measured by varying the disk velocity. "According to these data the half-life of 102^{254} is 50$\pm$10 sec." Zager et al. bombarded a ^{243}Am target with 82$-$84 MeV ^{15}N beams from the Dubna 150-cm cyclotron to form ^{254}No in the (4n) fusion-evaporation reaction. Recoils were transported by a helium gas stream onto a metal collector which was periodically transferred to a silicon surface-barrier detector to measure subsequent α decay. "According to our data, the half-life of 102^{254} is between 20 and 50 sec, and the alpha particle energy is 8.10$\pm$0.05 MeV." A 3 s half-life previously assigned to ^{254}No (1958Gh40) was incorrect. Both articles were submitted on December 15, 1965 and the credit is given to Donets et al. because their paper appeared first in the original Russian publication as well as in the English translation.

Adapted from reference (2013Th02)

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